

SLIDING-WINDOW TRANSFORM WITH INTEGRATED WINDOWING

Abstract of the Disclosure

5 A system for a sliding-window transform with integrated windowing is described. The system provides a Direct Fourier Transform kernel with an integrated windowing filter having a desired number of stages. In one embodiment, the windowing filter is a lowpass filter. In one embodiment, the lowpass filter has a rectangular filter transfer characteristic. The DFT includes a complex multiplier. A first portion of the windowing filter is provided before the complex multiplier and can be implemented
10 using real arithmetic. A second portion of the windowing filter is provided after the complex multiplier and is implemented using complex arithmetic. In one embodiment, the filter weights of the second portion of the windowing filter are unity and thus no multiplier is needed for the filter weights in the second portion of the windowing filter.

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